35/7 February 1970

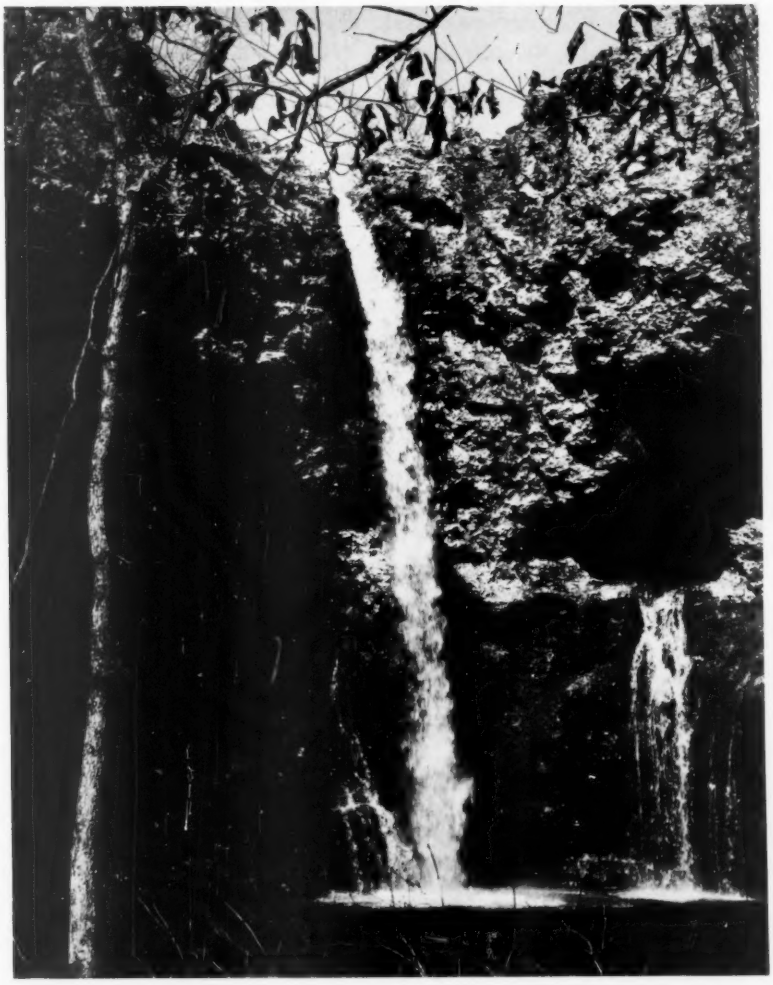
Conservation districts in the seventies

Public recreation areas

Soil Conservation Service
U.S. Department of Agriculture

Soil Conservation

Devoted to the wise use of land and water resources



February 1970 Vol. 35, No. 7

Soil Conservation

Devoted to the wise use of land and water resources

Dramatic . . .

Two years ago this month *Soil Conservation* reported on parallel studies by the National Association of Conservation Districts and the U.S. Department of Agriculture of the desirable direction for the conservation movement in the years ahead.

This month, Norman Berg from his vantage point as associate administrator of SCS takes a look (p. 147) at progress down the road charted by the so-called "District Outlook" report. He terms it "dramatic."

Contributed articles from Illinois (p. 152), Louisiana (p. 154), Wisconsin (p. 155), and Alabama (p. 159), document some of the many ways districts are moving into new fields of activity that improve the quality of the total human environment.

Recreation

Public recreation facilities created by small watershed projects are another example of the trend to broader purposes in conservation programs.

Recreation Specialist Ralph Wilson details a good sampling (p. 150), of the kind of resulting fun areas that supplement public parks on the one hand and private rural recreation enterprises on the other.

Sediment

Maryland's pioneering steps in suburban sediment control take a firmer stance in regulations for the Patuxent River watershed described (p. 156) by State Conservationist Ed Keil.

COVER: Increased values are placed on secluded and scenic places as conservation districts broaden their concern for quality of environment. Dripping Springs is on a recreation ranch in the Delaware Soil and Water Conservation District in Oklahoma.

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Prepared in the Division of Information, Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C. 20250

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What's new with conservation districts

By Norman A. Berg
Associate administrator, SCS

A district board meeting

The conservation district's governing board was in regular session. Two supervisors—one a business executive—reported on progress of the new small watershed project and the county's erosion control program for building development. A local builder, who had been asked to attend, commented on sediment-control measures for his project. An educator, another visitor, described his work to put more conservation into the school curriculum. A third supervisor reported on his recent meeting with regional planning officials. The SCS district conservationist's report told of a large increase in sod planting of corn in one part of the county and storm drainage control work with engineers of a new shopping center in another area.

Conservation districts have changed dramatically in the past decade.

An agenda such as that described in the adjoining column would have been hard to imagine as regular business for the governing board of a soil and water conservation district 10 years ago. Hundreds of boards would take it in stride today.

The "now" issues

Responding to the "now" needs of conservation, districts have broadened their interests to include such matters as urban erosion, watershed protection, water and air pollution, and town and country planning. They are combining these activities with traditional conservation work on farmland. In many cases, state legislatures have supported this trend by enlarging their legal powers and increasing their available funds.

Districts today are interested in the whole spectrum of resource development—soils, water, wildlife, land use, and resource planning. They are interested in the quality of the environment—cleaner water, clearer air, more beautiful surroundings. They recognize that town and country are tied together both physically and economically and that owners and users of land have a legitimate interest in improving the environment. In the America of the 1970's all of us live downstream, and downwind, from somebody else.

Planning activities

In many states, districts are working closely with regional or other substate planning districts and planning groups. They supply soil, water, and other resource information, including evaluation of local outdoor recreation potentials. In addition some district board members are members of their local or regional planning committees.

Some districts assist builders and developers in finding good sites and in planning needed sediment- and erosion-control measures during the construction period. For example, the "new towns" of Reston, Va., and Columbia, Md., are cooperators with their local districts, and Dulles International Airport, near Washington, D.C., received extensive help before and during the construction period.

In Georgia, almost all districts have entered into three-way memorandums of understanding with the 18 multicounty area planning and development commissions and the Soil Conservation Service. This has significantly increased the use of

soil and water resource inventories and conservation knowhow in the development of land use and water and sewer plans.

In the Chicago area, six soil and water conservation districts established a Natural Resource Service Center. Here, staff members from state and federal resource agencies are housed together to provide prompt, coordinated help with resource problems that cross district lines.

District assistance to nonfarm land and water users and to local governmental units has not, overall, meant a reduction in assistance to farmers and ranchers. California is now the Nation's most populous state and one of the fastest growing. It has had a tremendous increase in requests for district help in urbanizing areas. Yet, in fiscal year 1969, 1,500 farmers and ranchers received help in making conservation plans for their individual properties.

Similarly, the SCS, working primarily through districts, gave assistance to 80 to 90 percent of the planning commissions in Ohio during the sixties. At the same time, Ohio districts annually give conservation assistance to approximately 35,000 cooperators, the overwhelming percentage of whom are individual landowners.

Watershed and RC&D projects

Districts are cosponsors of more than 1,530 small watershed projects currently being planned, being built, or already finished, plus more than 1,300 other project applications awaiting action.

Districts are also active in planning or operations on 68 Resource Conservation and Development projects and have helped develop another 50 applications.

By contrast, in February 1960, there were *no* Resource Conservation and Development projects and only 526 small watershed projects in the planning or operations stage.

Working with more people

As citizen concern for the environment increases, district leaders are working with more and more varied groups of people, including mayors, county and regional planners, builders and developers, school boards, and women's and youth groups. For example, nearly 300 schools in Michigan alone are district cooperators and have received technical assistance in establishing outdoor conservation laboratories.

And more money

As the value of their work becomes more obvious to state and local groups, districts receive increased appropriations. For 1960, the total funding from state sources for conservation district programs was about $5½ million. In 1970, it will be nearly $31 million.

In the 10-year period 1958-68, nonfederal (state, local, and private) funds for district work increased almost 400 percent.

Legislative changes

District support was extremely helpful in securing passage of Public Law 91–118, which extends Great Plains Conservation Program contracting until December 31, 1981. The new legislation recognizes the role of districts in carrying out the total program and now provides (by law, instead of policy alone) that cost-share contracts will be based on conservation plans developed in cooperation with districts. The new legislation permits cost-sharing and technical help for fish and wildlife developments, recreation facilties, and the abatement of agriculture-related pollution.

On a state-by-state basis, there has also been considerable legislation that affects districts.

As of January 1, districts or subdistricts in 20 States have some powers of eminent domain. In 17 states, they have the power to levy assessments; in 25 states they have authority to borrow money; and in 12 the authority to issue bonds.

In 1969 alone, there was a substantial increase in authorization of state and county funds for district purposes. At least 15 states increased or authorized for the first time financial aid to conservation districts. In Minnesota, county commissioners can support districts with up to $15,000 a year per district.

Montana districts can increase their funds through collecting fees, issuing bonds, and borrowing money, while their county governments may levy assessments of 1½ mills for the benefit of districts in general and up to 3 mills for projects.

Districts were given broader powers to deal with renewable natural resources in more than half a dozen states last year. Several made changes in the elective process for district leaders, including changes in the number of supervisors and in their qualifications. Some states now require that one or more supervisors be urban residents.

In some states urban areas have been a part of districts from the beginning; in others they have been brought in by special legislation. For example, Mississippi in 1968, brought 80 towns and cities into

The name of the game

The original state enabling acts under which conservation districts were established called them Soil Conservation Districts. Currently, 14 states and Puerto Rico have Soil Conservation Districts; 30 states and the Virgin Islands have Soil and Water Conservation Districts; four have Conservation Districts; one has Natural Resources Conservation Districts; and another will change to Natural Resource Districts in the future. In Alaska, the entire state is a district, making Soil Conservation Subdistricts of the individual operating units and also making Alaska far and away the Nation's largest conservation district.

NACD's District Outlook

In 1966, the National Association of Conservation Districts published a booklet, "The Future of Districts." It recommended that districts:

(1) Represent all the people and community interests of their area in ascertaining, and responding to, conservation needs.

(2) Develop resource development programs for all of the people.

(3) Involve all the people, through appropriate representation, in the decision-making process relating to resource conservation and development.

(4) Accept and carry out responsibilities, including financial responsibilities, in connection with resource programs.

Districts are doing this, state by state, by their own methods, and on their own time-tables. More than 30 states have now formed permanent District Outlook Committees, and 2,725 out of 3,017 districts have formally updated their programs.

districts, and more than 30 of them have since received conservation help.

In nonlegislative action, Detroit, the Nation's fifth largest city, last year became part of a new soil conservation district formed to help solve land use and water problems in that rapidly developing region.

District leaders in all states are operating expanding, vigorous, and exciting programs that indicate the trend of the times. One of the most interesting is Nebraska, where the legislature has taken action to consolidate all natural resource activities into one system of operating districts. Maryland's pioneering sediment control regulations are described in another article in this issue (p. 156) as are Louisiana's agreements between conservation districts and other local units of government (p. 154) and Alabama's updated district programs (p. 159).

Nebraska

By a vote of 29 to 9, the Nebraska Legislature recently passed an act to eventually consolidate the state's 150 soil and water conservation districts, watershed and watershed conservancy districts, watershed advisory boards, watershed planning boards, and mosquito abatement districts into 25 to 50 natural resource districts. The new act now calls for these districts to begin operations in 1972.

The districts, to be organized on the basis of "common problem" areas, will have boundaries determined by the State Soil and Water Conservation Commission.

Every acre of land in Nebraska will be included within the new district boundaries, and the districts will have the powers of taxation (up to a maximum of 2 mills ad valorem), eminent domain, and contracting. District responsibilities will be to: (1) Prevent and control erosion, (2) control floods and prevent floodwater and sediment damages, (3) conserve soil, (4) provide water supply for any beneficial uses, (5) control pollution, (6) conserve and develop ground and surface water, (7) provide for solid waste disposal and sanitary drainage, (8) improve drainage and rectify channels, (9) develop and manage fish and wildlife habitat and recreational and park facilities, (10) carry out forestry and range management programs, and (12) abate mosquito problems.

The legislation, which was supported by the Nebraska Association of Soil and Water Conservation Districts, will consolidate natural resource functions into one local unit of government and increase its ability to meet the challenges of conservation and resource development in the 1970's. It will be interesting to watch development in Nebraska's natural resource districts during the next decade.

In the 1930's and 1940's, the immediate conservation need was stabilization and improvement of agricultural land. In the 1950's and 1960's, water and sedimentation problems and the needs of rural communities were spotlighted through small watershed and RC&D projects.

The coming decade

The 1970's may well be the decade of broader realization, by both ourselves and the American public, of the "one-ness" of all of these human and environmental problems, and of the urgent need for coordinated town and country planning to meet and solve them. ♦

Interior and Agriculture for national trails

Criteria to establish national scenic and recreation trails under the National Trails System have been announced jointly by Secretary of the Interior Walter J. Hickel and Secretary of Agriculture Clifford M. Hardin.

Basic procedures for setting up national scenic and recreation trails were spelled out in Public Law 90-543, approved October 2, 1968. In that act, Congress designated the Appalachian Trail and the Pacific Crest Trail as the first components of the new National Trails System.

The Appalachian Trial is administered by the National Park Service of the Department of the Interior and the Pacific Crest Trail by the Forest Service of the Department of Agriculture. Fourteen other trail routes were designated by Congress for study and possible future inclusion in the trails system.

The nationwide system will consist of two general trail classifications: National Scenic Trails and National Recreation Trails. Criteria adopted by Interior and Agriculture call for national scenic trails to have superior scenic, historical, natural, or cultural qualities with maximum outdoor recreation potential. ♦

At the local level . . .

Public recreation areas meet a need

By Ralph C. Wilson
Recreation specialist, SCS, Washington, D.C.

During its first 60 days of operation, the Lake Jericho recreation area near New Castle, Ky., attracted more than 15,000 paid visitors.

Such heavy use in a state rich with opportunities for water-related outdoor recreation and an outstanding state park system demonstrates the need for more recreation facilities even in a land of plenty.

Lake Jericho is an example of how people at the local level are meeting this need through small watershed projects. The 300-acre development beside one of six flood-prevention reservoirs in the Little Kentucky River Watershed Project is complete with such facilities as camping and picnicking accommodations, launching ramps and boat docks, shelter and sanitary buildings, roads and parking lot.

It was installed under provisions of a 1962 amendment to the Watershed Protection and Flood Prevention Act authorizing federal assistance for recreation facilities and water-resource improvements in small watershed projects.

Most of the local costs of the development, which must be self-supporting, were financed by a 40-year $240,000 loan from the Farmers Home Administration. The sponsors expect to repay the loan with returns from concessions and a user fee. The Soil Conservation Service cost-shared the installation of basic facilities, enlargement of the water-storage structure, and land easement for recreation purposes to more than $250,000.

Lake Moffit, 150 miles to the southwest in Union County, is another example of such local recreation development. Facilities provide opportunities for camping, picnicking, swimming, fishing, and limited water sports on a 50-acre lake. Total cost of the 136-acre development was $292,973, of which $145,230 was financed by the Cypress Creek Watershed Conservancy District through a FHA loan.

Similar examples are Montgomery Lake and Park in the Prairie Creek Watershed Project in Indiana; the Arm Brook site in the Powdermill Watershed Project near Westfield, Mass.; and the 23-acre lake and adjoining recreation area 2 miles from Lindsay, Okla., in the Bear-Hybarger Creek Watershed Project.

And, so, the list could be continued. These all are local efforts, intended to supplement rather than compete with state and federal recreation developments.

Since the recreation amendment was enacted, a total of 161 public recreation developments and 81 water-resource improvements for recreation has been approved for operations in 181 different watershed projects in 40 states. In addition, 13 public developments and 69 water-resource improvements for fish and wildlife have been approved in 65 projects in 29 states. When completed, these developments are expected to provide more than 15 million visitor-days of water-related recreation each year, with annual monetary benefits of $20 million.

Most public recreational and fish and wildlife developments have been sponsored by state park and wildlife agencies and county and municipal recreation and park departments.

Under the 1962 amendment, the Secretary of Agriculture, through the Soil Conservation Service may pay up to 50 percent of the costs of (1) enlarging dams for public recreational use, (2) acquiring land rights for the larger reservoirs and adjacent land, and (3) constructing basic facilities needed for public health and safety, access to, and enjoyment of the recreation area.

Basic facilities may include such items as boat docks and ramps; beach development; bath houses; campsites; picnic tables, fireplaces

A picnic area at Lake Moffit adjoins a sand beach and swimming area.

and shelters; sanitary facilities; public water and power systems; roads, trails, and parking lots; signs; fencing; planting for erosion control; landscaping and beautification; and other similar or related items.

Although the number of recreation "developments" within a watershed is limited by the size of the watershed, there is no limit to the number of public recreation or fish and wildlife "water resource improvements." A "water-resource improvement" may be a reservoir; a lake level control structure; stream or channel improvement or stabilization, or a similar improvement for water-related recreation or fish and wildlife purposes where provision is made for public access or use.

Like Lake Jericho, Montgomery Lake and Park in Daviess County, Ind., was a success from the beginning and continues to gain in popularity. Since the 26-acre lake and 13-acre park were opened to the public on the Memorial Day weekend in 1967, their use has exceeded all expectations. The demand for camping and swimming has been so great that the local sponsors, the town of Montgomery and the Ruritan Club, have increased the beach area by 50 percent and have installed additional camping spaces. The development has been financially self-sustaining.

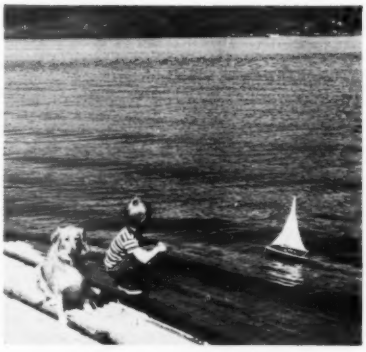
The city of Westfield, Mass., last year purchased an additional 8.7 acres of land at the Arm Brook multiple-purpose structure in the Powdermill Brook Watershed Project. This increased the recreational area to 48 acres. Attendance records show that up to 4,000 bathers weekly use the facility. The lake has provided many hours of fishing for people of all ages. The barbecue and picnic facility on the newly acquired land has accommodated up to 600 people at one time from surrounding cities and towns. Project EPIC (Education Project to Implement Conservation—an HEW Title 3 Project) representatives have used the area as an outdoor classroom.♦

Watershed lake draws aquatic enthusiasts in Pacific northwest

Once wild-looking and unused, Cullaby Lake, in the northwest corner of Oregon, today is a haven for thousands of pleasure-seekers.

Developed as part of the Skipanon Watershed Project, Cullaby, in the Warrenton Dune Soil and Water Conservation District, is a popular gathering place for water skiers, sports fishermen, and aquatic enthusiasts from as far away as Portland, 90 miles east.

On a good weekend, some 600 people use the area; the total reached 72,000 in 1968. Group picnics attracted more than 4,000 people in 1969 and the Astoria (speed boat) Regatta is viewed by about 2,000 each year.



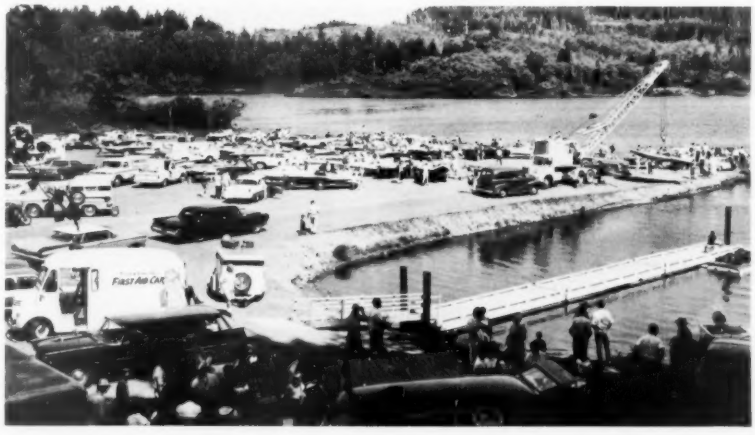
Recreation development was financed through cost-sharing agreements between Clatsop County and the Soil Conservation Service under the 1962 recreation amendment to Public Law 566. Clatsop County has invested additional funds in the development.

Originally Lake Cullaby was just a 200-acre water hole surrounded by private tree farms, abandoned farmland, and public land.

Controlling the water level was the first step to a successful development of Cullaby Lake as a recreational center. Before installation of a control structure and enlargement of the stream channel, water in the lake fluctuated as much as 8 feet during the year. Now it rarely varies more than a foot. This control made it feasible to construct two concrete boat ramps, a boat basin with docking facilities, and a sand beach.

Hard-surfaced roads and parking facilities, picnic areas equipped with fireplaces, picnic tables, garbage disposal service and restrooms were installed.—DON LEACH, *district conservationist, SCS, Astoria, Oreg.* ♦

Astoria Regatta is a busy time for boaters, large and small, at Cullaby Lake.



A multicounty natural resource service center

By Richard L. Duesterhaus
Soil conservationist, SCS, Lisle, Ill.

"We must always be sure we are working on truly multicounty resource problems, and we insist that individual conservation districts, counties, and municipalities take full responsibility for local programs."

Conservation in northeast Illinois is developing in the tradition of Abraham Lincoln's famous phrase "of the people, by the people, and for the people."

The Northeast Illinois Natural Resource Service Center, located near Chicago, encourages people to become involved in planning solutions to natural resource and environmental problems in a block of seven counties feeling the main push of the expanding metropolis.

A central point

A nonprofit organization, the center serves as a central point for areawide resource information and for the coordination of government and private efforts to deal with problems generated by the urban upheaval. It serves a population of 7 million people with a multitude of taxing bodies and municipalities.

The center was organized in 1968 by the five soil and water conservation districts in the counties of Cook, Lake, McHenry, Kane, DuPage, and Will. Kendall County joined as the sixth conservation district and the seventh county several months later. It is headquartered in the Morton Arboretum at Lisle.

The long range goal of the center is to offer its services as a regional coordinating agency in making the best possible use of the land and water resources in northeast Illinois.

The specific long range objectives are:

(1) Assist in the natural resource development of the Fox River Basin.

(2) Assist local and county governments in making the best use of federal and state funds available for conservation projects in the area.

(3) Reach the general public with natural resource information which will lead to the orderly development of the area.

(4) Delineate and evalute possible areas for watershed development.

(5) Assist in the development of recreation and nature preserve areas on a multicounty basis.

Intent on supplementing the work of soil and water conservation districts, the center serves as a focal point for attacking areawide problems in a more effective manner. It has worked with local and regional units of government and other multicounty groups rather than with individual landowners.

Supplementing districts

"We must always be sure we are working on truly multicounty resource problems, and we insist that individual conservation districts, counties, and municipalities take full responsibility for local programs," declares Kenneth V. Fiske, executive director.

In the first year, requests for help came from the American Society of Public Administrators, the University of Illinois, the World Flower Show, National Accelerator Laboratory, and units of government and industry needing information about soil, water, and related resources.

The center is now promoting the use of soil information as a basis for fair taxation and gathering geologi-

cal information for use in multi-county planning of gravel pit rehabilitation. It has arranged with the University of Illinois for automatic data processing of natural resource facts. The aim is to set up a comprehensive retrieval system for facts about Chicago area soils, water impoundments, hydrology, minerals, and other physical features. This information will then be quickly available to any inquirer.

Counseling help

One of the functions of the center is to counsel with agencies and organizations on the availability and need to utilize natural resource information.

Technical services are provided to planners, developers, public officials, and private concerns by appropriate agencies, many of which have memorandums of cooperation with the center. Cooperating agencies include the seven conservation districts, the U. S. Soil Conservation Service, Illinois Division of Forestry, Illinois Geological Survey, Morton Arboretum, Illinois Division of Conservation Education, Illinois Water Survey, Illinois Division of Soil and Water Conservation, Association of Illinois Soil and Water Conservation Districts, Illinois Division of Waterways, Northeast Illinois Planning Commission, Cooperative Extension Service, Illinois Water Pollution and Conservation Commission, and the McHenry County Board of Supervisors.

Two agencies, the SCS and the Illinois Division of Forestry, have offices at the headquarters. As time goes on, it is expected that other agencies will take up residence there.

Eventually, the center hopes to have officed at the headquarters representatives of cooperating agencies such as a full-time conservation education coordinator, an Extension specialist in natural resources, and specialists in fish biology and game management, recreation development, and nature center planning.

Fiske is the only full-time member of the staff. He meets quarterly with the board of directors made up of the chairmen of the seven conservation districts plus representatives of some state and local agencies. Other agency representatives serve in an advisory capacity. The basic problem, according to Executive Director Fiske, is getting a solid procedure for financing. The two major sources of funds for the first year were the State of Illinois and the Regenstein Foundation, a Chicago institution interested in the natural environment.

The SCS is represented on many regional committees and works with all the planning commissions in the area. Personally, or by phone, its conservationists work with officials, developers, and landowners singly or in groups throughout the Chicago area. Mapping of soils is proceeding rapidly; the job is completed in three counties and nearly done in two more.

When necessary, the Service Center can act quickly. A recent example was an $80 million housing project planned on soils of doubtful quality for adequate sewage disposal by septic tanks. An emergency request came to the center, and factual data on soils, water, and geology were made available to the developer and to the officials who had to make the zoning decisions. The developer offered to alter his plans to fit the existing resources.

Sponsors of the center and the conservation district directors are pleased with operations so far. ♦

District celebrates jubilee

Conservation and beauty share the spotlight at Harlan County's Conservation Jubilee each September.

People from five small towns in Nebraska gather for the 1-day celebration that begins and ends with all eyes on lovely candidates for Queen of the Conservation Jubilee.

The event is sponsored by the Alma Chamber of Commerce and the Harlan County Soil and Water Conservation District.

Pageant originator Bill Richards, former president of the National Association of Soil and Water Conservation Districts and former chairman of the district board, presides over a kick-off luncheon for candidates, sponsors, and judges.

There were six entries in the first jubilee contest 13 years ago. This year 22 young ladies vied for the honor and rode through downtown Alma on individual floats. More than 5,000 people lined the streets of the county seat for the parade.

While celebrators of all ages enjoy games and other performances, would-be queens are judged on their poise and interest in community affairs. This year Miss Nebraska was one of the judges.

In the evening, after a beef barbecue, the district announces the honor conservation family of the year and five outstanding conservation families. Conservation essay contest winners collect cash prizes. This year, the Goodyear Award to the outstanding district in the western half of the state was presented to the Harlan County District at the affair.

When the evening gown competition is over and the queen and her six-member court have been announced, teens and adults finish up the festivities at separate dances.

The district's annual report is part of the jubilee's printed program. Radio and newspaper coverage provide additional records of the county's biggest annual event. ♦

Left, the mayor and the airport commissioner of Minden plan conservation work on the airport with the SCS district conservationist.

Louisiana districts sign agreements with cities and parishes

"Say, can you folks help with soil problems on city land?" is the way Farmerville, La., Mayor J. G. Elliott put it when he talked to SCS District Conservationist Clint Smith.

"Sure, we can," said Smith, "but how about becoming a cooperator with the D'Arbonne Soil and Water Conservation District first. The board meets next week."

Sure enough, Mayor Elliott was there and signed an agreement with the district making Farmerville one of more than 20 cities in Louisiana to do so.

According to the latest tally, 25 parish police juries also have signed agreements with 13 of the state's 29 districts. Several school boards and local development commissions also have working agreements with their conservation districts. More than 30 projects dealing with soil and water management are underway as a result of parish and city agreements.

For nearly 40 years the district-SCS team has helped farmers plan and put conservation on the land. In Louisiana there are some 55,000 cooperating landowners with conservation plans on more than 11 million acres.

Responding to the growing demand from nonfarm land users for conservation assistance, the Louisiana Legislature in 1967 amended the state's soil and water conservation law to bring cities and towns into districts. District leaders and conservationists started that fall to meet with city and parish governments and other groups to discuss conservation needs.

All conservation districts have agreements with the Louisiana Forestry Commission. The State Parks and Recreation Commission has signed an agreement with the State Soil and Water Conservation Committee and is now developing an agreement with each district.

Mayor Elliott is getting the help he asked for. The Soil Conservation Service has made a soil survey of the town's new industrial site and is helping locate a site for garbage disposal. The district is providing information and assistance on erosion and water management problems in the town and is planning to help with beautification projects.

The agreement between the Beauregard Parish Policy Jury and the Calcasieu Soil and Water Conservation District resulted in SCS making a survey of roadside erosion in the parish and locating soils suitable for sanitary landfills.

The town of Coushatta signed an agreement with the Saline Soil and Water Conservation District in 1968. SCS helped locate a 20-acre oxidation pond for the town's sewage disposal system. After the structure was designed by a private consulting engineer and construction was completed, SCS helped sod and seed the levees to keep down erosion. The pond is almost complete and soon

sewage will no longer be discharged into nearby Red River.

The town of Minden used district help to put in two water-control structures and to shape and seed an eroded area at the city airport. These were project measures in the Bossier-Webster RC&D Project and received technical and financial assistance from RC&D funds.

In Lincoln Parish the district and SCS are working with the police jury to make trial plantings on parish roads for erosion control.

In the rice country at Welsh the district signed an agreement with the town, and the SCS counseled with town officials on solutions to drainage and erosion problems. At Homer the town became a cooperator with the district and received technical assistance in solving a drainage problem on the Homer Golf Course.

M. W. Scanlan, Jr., president, Louisiana Association of Soil and Water Conservation District Supervisors and chairman of the Association's District Outlook Committee, says Louisiana districts are looking for new opportunities for service. These are a few examples of how they are doing it. ♦

Forestry to use space program

The National Academy of Sciences has found a way to use space technology in the world forestry program and believes that all of the earth's population can benefit from the plan. NSF feels that space satellites could be used to gather information about the world's timberlands.

"The expanding population and economic growth of the United States and of the world require the continued development of the world's forest resources," said a National Science Foundation study panel. Reliable information about this resource should be obtained not only in advance of its exploitation but also as its protection and management are intensified. ♦

Board creates link with local youth

What does it take to fire up young people about problems that are literally in their own backyards? What is there about conservation that will turn them on?

Here in Grant County, Wis., we let youth strike its own spark by creating a junior board of soil and water conservation district supervisors. This group of young people is invited to help the district governing body bring conservation to the area.

"Ours is the first junior board in Wisconsin, although other states have them," said Alfred Klein, chairman of the Grant County board.

Junior board members are recommended by their 4-H club leaders, vocational agriculture instructors, and those who know of their Future Farmers of America activities. Each is appointed for 2 years with possible reappointment to a 1-year term. In Grant County there is an equal number of junior and district board members—14 in all.

Said John Adametz, 1968 junior supervisor chairman, "Our main thrust will be to work with other youth organizations on the conservation of our natural resources."

Coached by the district conservationist, junior supervisors make out work plans, arrange youth activities, and participate in the district's information and education program. More than 75 percent of these ideas come from the boys themselves. Most of the time the adult board agrees.

The junior board members have helped set up, host, chair, and judge annual 4-H conservation speaking contests with as many as three sessions at a time before audiences of 200 or 300 people. They also guide 4-H conservation projects in wildlife management, soil and water resource planning, and nature study.

During FFA activities, junior supervisors may organize speaking contests or help run events such as land judging. They explain rules, act as guides, and assist the district judges. When they talk to 4-H or FFA audiences, junior board members may use SCS movies or slides showing local situations.

Boy Scouts and Girl Scouts rely on this service when planning conservation practices for merit and proficiency badges. By joining with the junior supervisors in an activity, Scouts can help apply practices rather than just hear about them.

Junior board members are often invited by school teachers to help present conservation programs in natural science classes. The boys visit other schools and hold outdoor lab sessions.

"We find that youngsters remember stories," one member said. We tell them how Indians used birch bark for canoes, how the honeylocust is attractive to bees for making honey, and the way liquid turpentine comes from pine. Training can be more technical in high school. We can even get into economics. If soil types are discussed, we try to take students to typical areas."

"Participation is a must. We arrange programs so that each person will get a chance to do something." The junior board of supervisors has found that its unique approach to public information is an asset to conservation programs in the district.—JAMES K. TEW, *district conservationist, SCS, Lancaster, Wis.* ♦

Farm wage workers

Of the total number of wage workers in the United States in 1948-49, farm wage workers on the average constituted 65 percent. By 1966-67, farm workers comprised only 27 percent of the total. In 1948-49 there were 3,946,000 farm wage workers compared to 2,920,000 in 1966-67.

Mopping up on the menace of MUD

Maryland legislature enacts sediment-control measure for urbanizing area; authorizes county ordinances

By Edward R. Keil
State conservationist, SCS, College Park, Md.

Builders and developers in the Patuxent River watershed of Maryland, including the expansive "new town" of Columbia and adjacent rapidly urbanizing areas, are subject to sediment-control regulations enacted by the 1969 General Assembly.

Besides the mandatory measures applying specifically to the seven-county Patuxent drainage area, the legislature authorized all counties to enact ordinances aimed directly at the "menace of mud," chief destroyer of water quality, in subdivisions throughout the state.

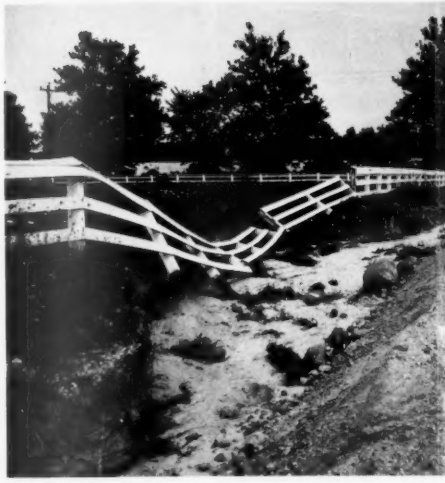
The Patuxent measure is patterned after the anti-sediment campaign launched initially in Montgomery County, a suburb of the District of Columbia (*Soil Conservation*, November 1966).

Four other Maryland counties have adopted similar programs, and three others are considering "stop mud" regulations.

The state's requirements for builders in the Patuxent watershed extend sediment controls beyond subdivisions for housing to include commercial and industrial facilities. The law also embraces highway construction by the state, counties, and municipalities.

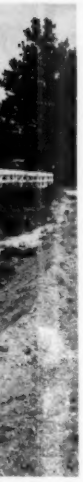
Operators must file sediment-prevention plans with local land use agencies and obtain approval of the soil conservation districts involved before building permits are issued. The Patuxent legislation also provides strict controls on sewage pollution to be administered by county health agencies.

Maryland's advances in curbing sediment damage result from a unique melding of rural and urban points of view, plus related know-how. Soil conservation districts and the Soil Conservation Service have long offered skills in agricultural conservation. Enlightened builders and developers have sought damage-abating methods suitable to their operations and the economics of their trade. County planning bodies and governing officials reflect the growing communitywide interests in improved environment for family life.



Above, faulty design of a roadside ditch induces bank erosion. Below, a concrete lining permanently stabilizes a drainage channel. Far right, a basin traps sediment before it leaves a construction site, and the builder uses it for fill material.

A sense of responsibility toward vital natural resources has prompted cooperation among Maryland urban and suburban land operators. Home builders' associations have freely endorsed sediment-control practices even in unregulated areas. Trade spokesmen openly voice satisfaction



A housing development under construction (upper left) without temporary sediment controls becomes a quagmire during a rainy spell. In contrast, carefully landscaped lots on rolling terrain are well stabilized with storm waters adequately handled by paved gutters and piped outfalls.

with the more attractive, saleable properties resulting from applied conservation.

Results of the program are visible on hundreds of widely scattered sites —especially along the axis of heaviest construction between Baltimore and Washington. Techniques are adapted to the precise soil and water conditions at each location.

Basic requirements of an effective sediment-control program on building sites include: (1) Saving natural vegetation wherever possible; (2) avoiding unnecessary disturbance of soil; (3) early installation of permanent storm drains and roads; (4) planting of temporary vegetation on denuded soils; (5) installing permanent vegetation speedily after construction; (6) construction of basins to trap sediment onsite; and (7) engineering to take care of marked increases in water runoff that follows development.

Beginning with Montgomery County's pioneer program, the Soil Conservation Service has assisted conservation districts in setting standards and specifications for sediment-control measures. As experience accumulates, these are refined to fit the practicalities of construction as well as improving their effectiveness in preventing resource damages.

Tangible benefits of the effort can already be seen at a number of sites where construction proceeds with reduced problems of mud and dust. Montgomery County leaders point to two new multipurpose lakes in Rock Creek Park completed only after sediment control for the small watershed project was put into effect.

Research now being conducted by the U. S. Geological Survey in Rock Creek and Anacostia River watersheds soon will provide more exact answers as to effectiveness of sediment controls. Other studies are evaluating the effects of individual practices and testing the use of flocculant compounds as a means of desilting water and reducing turbidity in streams.

Interest in sediment control is turning to action in nearly every soil conservation district where urbanization is underway. Marylanders are heartened by the action of the 1969 legislature and in evidence of growing support for making the Patuxent sediment-control requirements statewide. ♦

District leader sets fast pace

The president of the Missouri Association of Soil and Water Conservation Districts, André Luys, attained that position of prominence in 4 years of conservation activity.

In 1964, "Andy" helped organize the Jasper County Soil and Water Conservation District and was promptly elected chairman of its board of supervisors. In 1968, he became head of the state organization.

During those 4 years his district won two newsletter awards and sponsored one of the largest conservation poster contests in the Nation, with more than 3,000 entries each year. Conservation field days, radio, television, and newspapers were used to promote conservation. In 1968 the Jasper County District was the Goodyear contest winner in Missouri.

Luys naturally practices conservation on his own farm, having built a diversion, silting basin, waterway, terraces, farm pond, and established pastures and windbreak-wildlife areas. He has served as treasurer of the County Extension Council and as a state ASCS Committee man.

During 1967 Luys was active in the formation of the Southwest Missouri Resource Conservation and Development Project, and now is vice-chairman of its 50-member steering committee. That year he was honored by the local Farm Bureau as "Farmer's Friend of the Year."

In his talks to civic clubs, district meetings, and other organizations Luys says, "Our creator gave us a limited amount of resources, and as our population grows we must be ever mindful of our duty to conserve these, especially our soil and water." ♦

Computers speed solution of wind-erosion problems

Computers may bring increased speed and accuracy to the search for solutions to the age-old problem of wind erosion.

By using a wind-erosion equation programed for computer solution, researchers have been able to calculate annual soil loss as influenced by such factors as climate, field roughness and length, and vegetative cover.

Results of computer analysis can be used to determine necessary changes in field conditions to reduce erosion potential. Alternative practices can be evaluated quickly and simultaneously for comparative cost and effectiveness.

The high-speed approach to wind-erosion data studies was explained by Dr. E. L. Skidmore, Agricultural Research Service, Manhattan, Kans., at the 1969 annual meeting of the American Society of Agronomy in Detroit, Mich. ♦

District's updated program extends service to nonfarm land users

By E. L. Norton
District conservationist, SCS, Brewton, Ala.

An updated long-range program has identified new areas of service for the Escambia County Soil and Water Conservation District in Alabama.

The broadened program includes technical assistance to units of government, planning commissions, and groups by providing resource data and suggesting conservation alternatives for sound use and treatment of nonagricultural land.

The 615,680-acre district is basically an agricultural county. According to Extension Service estimates, Escambia County's gross agricultural income of $12.5 million in 1968 ranked 19th in Alabama.

The revised program continues to emphasize assistance on rural land but provides for the growing number of land users near to and within municipalities and builtup areas. The need for soil and water conservation work on land in all uses became apparent during 1968 while the board of supervisors was considering a revision of its program.

In 1968 the conservation district board of supervisors and city officials of Brewton discussed the use of natural resource information and technical assistance as an aid in developing a long-range comprehensive plan for the city.

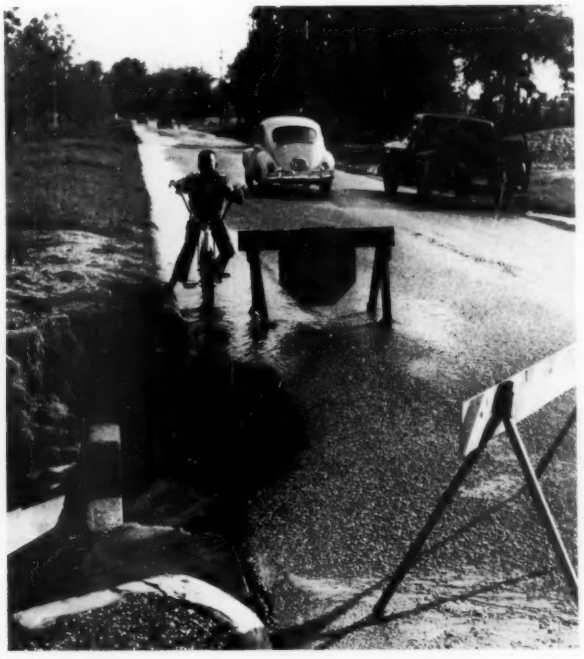
The Soil Conservation Service is preparing soil survey information including maps identifying the location of each soil, descriptions of the soils, and tables showing limitations and hazards of each soil for various uses. Interpretations will be made for the soils for such uses as residential sites, septic fields, sewage lagoons, sanitary landfills, parks, and trafficways.

Brewton is making use of the information in evaluating an area for a sewage lagoon, and selecting a site for a sanitary landfill.

The cities of Atmore, East Brewton, and Flomaton have planning needs similar to Brewton's, and the conservation district's revised long-range program provides for assistance to these municipalities. It also anticipates working with the South Alabama Regional Planning Commission, the county board of commissioners, and community groups.

The supervisors realize that problems and potentials of land resources are not limited to any one type of land user. Realizing that the general public needs to understand the need for a strong soil and water conservation program, the board has published the updated program. It will be distributed to educators, county and city officials, planners, and other leading citizens. ♦

A gutter and street in Brewton caved in where the sandy soil was inadequate to support the asphalt, and another street flooded during a summer rain. The city's soil map delineates such hazard areas for the guidance of future developers.



More water for centuries-old irrigation systems

Improvement of two irrigation systems has changed the future outlook for 49 families in Cebolleta and Bibo, N. Mex., on the east side of Mt. Taylor.

This area was the home of Indians before the Spanish occupation. The communities have remained almost isolated down through the years. An uranium strike nearby at the Jack Pile Mine in 1954 increased the need for better roads. Then an all-weather road was built to the communities in 1962, and in 1968 the first telephone was installed.

For nearly 200 years the people in the communities have rebuilt and maintained the irrigation systems. Many days of hard labor went into upkeep and repair of the systems each year.

To improve these irrigation systems, the people petitioned themselves into the Lava Soil and Water Conservation District in 1965. The Lava District supervisors gave the projects top priority. Investigations and surveys for design work began immediately. Some steps took more time, such as getting proper storage rights and reaching agreements among the Soil Conservation Service, Agricultural Stabilization and Conservation Service, and the state engineer as to where and how the jobs should be done.

The needed diversion dams are made of concrete. Each irrigation system has a 10-inch plastic pipeline to convey the water from the diversion to the storage reservoir, and each reservoir holds 50-acre feet of water. This storage capacity is about double the original storage capacity for Bibo and about five times that for the Cebolleta system.

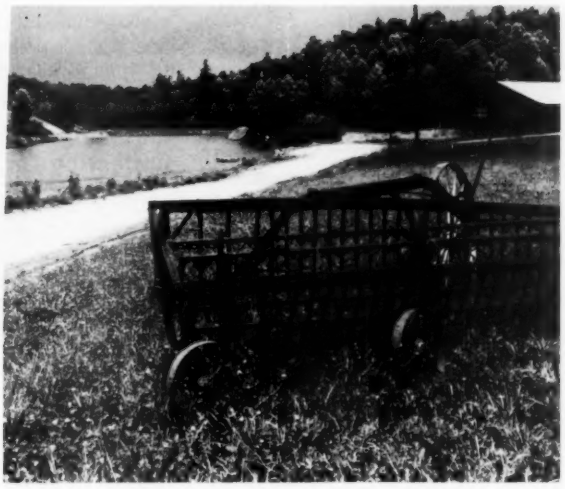
The completed projects will make it possible to use water more effectively by making it available during the growing season when it is needed most. As much as 50 to 100 percent more water will be available at this critical period.

While these projects will not solve all the problems facing these communities, they will help. Home gardens and orchards help supply food. Alfalfa, oats, and barley are also grown. There is a potential future in a specialized crop for the area—chili grown there because of its special flavor.

More work needs to be done, fields to be leveled and ditches lined to make the most efficient use of the water available.

"We have made a good start, and I hope we can continue to improve our systems until we can save all the water for our crops," said Rosendo Marquez, president of Cebolleta Grant, where the communities are located.—JOHN BONOMO, JR., *district conservationist, SCS, Grants, N. Mex.* ♦

The old reservoir (lower right) was maintained during construction of Cebolleta Reservoir to hold water for sprinkling the new fill.



Pace's recreation center.

Conservation in action...

Recreation center hits the mark

North Carolina

Bull's Eye Recreation Center, part of a 350-acre mountain farm in Hendson County, N.C., aptly depicts the current success of privately developed, farm-based recreation facilities.

Walter L. Pace, a young farmer in the Mountain Page Community, zeroed in on his land's recreational potential during the early 1960's, then adjusted his aim with the assistance of the Henderson County Soil and Water Consrvation District and cooperating agencies. Together, they designed and built a lake, bath house, cabin sites, pavillion, picnic areas, and campground.

After initial conferences with the Soil Conservation Service, Pace invited other federal and state agencies to lend their technical and financial assistance. Representatives of the North Carolina Recreation Commission, the State Board of Health, and the U.S. Forest Service visited the farm and gave Pace written recommendations in their specialized fields.

The Farmers Home Administration helped develop plans for buildings and made a loan to help with their construction and land development. The Agricultural Stabilization and Conservation Service cost-shared some of the conservation practices and approved the enterprise as a project under the Cropland Conversion Program.

The Soil Conservation Service helped Pace develop a conservation plan for his entire farm, including orchard, woodland, and recreation areas. In 1963, SCS supervised construction of two lakes, a silt dam, and two diversion ditches.

Bull's Eye opened the following year, with large crowds on hand.

The recreation enterprise yielded a steady income from the start. Although small at the outset, it has become a substantial part of the farm income. In 1968, the recreation income nearly doubled that of the previous year.—JOHN L. BROWN, *district supervisor, Henderson Soil Conservation District, and* L.D. CURLE, *area conservationist, SCS, Hendersonville, N.C.*

Texas

Conservation raises range condition and stocking rate

A 9-year conservation program converted H. R. Easterling's north central Texas ranch from one covered by post oak brush in poor to fair range condition to a grass range in good to excellent condition.

When he signed a Great Plains Conservation Program contract in 1961, his stocking rate was 30 acres per animal unit. Now it is 15 acres per animal unit.

Since 1961, Easterling has:

—controlled brush on 802 acres by aerial spraying, chaining and goating, and grubbing.

—seeded 319 acres of rangeland.

—seeded 32 acres of improved pasture.

—converted 143 acres of cropland to grassland.

—constructed some 2 miles of cross-fences.

—constructed five ponds for livestock water. In addition, Easterling adjusted his livestock numbers and put into effect a rotation deferred grazing system.

Easterling's conservation success on the ranch is duplicated by his conservation efforts in the community. From 1964 until 1968, he was a supervisor of the Young County part of the Upper West Fork Soil and Water Conservation District.

A cooperator since 1952, Easterling was named Young County's "Outstanding Conservation Rancher" in 1964 and was recently recognized by the Texas section of the American Society of Range Management for having achieved excellence in grazing management.—GARY K. WESTMORELAND, *range conservationist, SCS, Graham, Tex.*

Colorado

Colorado stock farmer tries raising rainbow trout

Fish farming and ranching are compatible land uses. Doubters are being convinced of this at Bobby Williams' Sunnyside Trout Farm south of Durango, Colo., in the La Plata Soil Conservation District.

On his 320-acre livestock farm he irrigates pastures and fields, mostly improved forages and corn, from natural springs above his place.

In 1967, after lengthy investigation, he decided to see if the same springs could be diverted profitably through raceways for rainbow trout. The 3-year-old experiment is so successful, Williams intends to add more raceways and a pond.

An SCS biologist advised him that the spring water was of good quality for trout, and an SCS engineer advised him on the installation of a diversion system to supply cold, swift, silt-free spring water.

Williams then constructed five earthen raceways measuring 100 feet long and 12 feet wide for some 75,000 small trout. Some water is diverted to 100,000-egg-capacity hatching troughs.

Twice annually, after the baby rainbows are hatched, they are transferred to the raceways, and fed there until sold. Those not sold for restocking ponds and streams are grown to proper size and sold to restaurants and retail stores.—E. N. McGUIRE, *district conservationist, SCS, Durango, Colo.*

Massachusetts

Massachusetts town plans protection for sand dunes

Dune stabilization is part of a long-range program for the protection and development of the Richard T. Crane, Jr., Memorial Reservation near Ipswich, Mass.

Reservation trustees applied for assistance from the Essex Conservation District after citizens had studied the seashore's current condition and ecological history.

District supervisors arranged for technical recommendations by the Soil Conservation Service and the University of Massachusetts. The SCS Plant Materials Center in New Jersey supplied 6,100 culms of a vigorous strain of American beachgrass, 200 rugosa roses, and 7½ pounds of coastal panicgrass.

Young people from Ipswich, under the direction of Col. Charles Coates, superintendent of the reservation, have helped plant new cover that will enable dunes to withstand human traffic as well as weathering. Dune buggies and human feet had damaged original vegetation.

Garden Club members and others are working on a program to promote conservation practices, including educational nature walks for school children and the general public as well as other projects to help protect the dunes.

Ipswich citizens' interest in the reservation's condition will continue to make the difference between devastation and preservation of their prized resource.—ROBERT N. MOREHOUSE, *district conservationist, SCS, Acton, Mass.*

Wyoming

Recreation and ranching mix well for cattleman

A vacation at Hyde Merritt's 14,000-acre Cheyenne Pass Boys' Ranch on the east front range of Wyoming's Laramie Mountains is an unforgettable experience for 12-16-year-old youngsters. It is also an example of how recreation can be adapted to cattle ranching.

Merritt started the vacation ranch 20 miles west of Cheyenne, Wyo., in 1964. He uses renovated bunk houses and homestead cabins for sleeping and living quarters. Boys eat at the main ranch house or cook out. To provide recreation, a fish pond was constructed with technical help from the Soil Conservation Service and cost-shared by the Agricultural Conservation Program.

Youngsters learn to ride, care for, and groom horses. Survival in the wilderness is an integral part of the boys' training, besides haying, fence mending, and other regular ranch duties.

Williams' feeding lot.

Planting beachgrass at Crane Memorial.

Merritt, a former Wyoming state steer roping champion, is a quarter horse judge and contractor of rodeo stock. A highlight of the boys' vacation is helping care for and trail the rodeo stock to various rodeos.

In 1967 Merritt purchased land bordering the Medicine Bow National Forest and promptly worked out a development and conservation plan as a cooperator with the Frontier Soil and Water Conservation District. Expansion of the boys' ranch was top priority; selling hunting and fishing rights and weekend cabin site leases were also part of the plan.

Renovation of facilities was a matter or economics. Choosing the right site for the cabins, however, was determined by a detailed soil survey. Improved fencing now insures compatibility for cattle and recreation users. Range management provides grass for cattle and browse for deer. A proposed dam will provide fishing and boating.

Merritt maintains that recreation and cattle ranching can mix with benefit to ranch profits.—DONALD J. HEYNE, *district conservationist, SCS, Cheyenne, Wyo.*

Kansas

Redbud beautification inspires all ages

When spring comes to Chautauqua County, Kans., residents proudly view their beautiful green hills and pastures accented by thousands of rosy native redbud trees.

For 7 years, county civic leaders have sponsored weekend Redbud Tours when the trees are in bloom. Each year thousands of visitors admire the natural beauty of the area as they drive over winding gravel roads, view valleys from hilltops, and ford clear streams. To promote beautification in other places, Chautauqua County gives redbud seedlings to tour visitors.

After rain reduced the turnout for both weekends of the 1969 redbud bloom period, the Sedan Chamber of Commerce had to dispose of about 500 seedlings intended as gifts for the tourists.

Soil Conservation Technician Bill Siegrist of Sedan and the junior group of his 4-H Club found a solution. The 7- to 12-year-olds responded eagerly to the idea of planting a redbud lane along a 3-mile stretch of US-166 and K-99 highway south of Sedan.

While they planted nearly 400 trees, the 4-H'ers envisioned the pink passageway that would be enjoyed by thousands of people in decades to come. Adults drove trucks and dug holes during the cool, rainy afternoon. Cooperating landowners furnished youngsters with free movie passes.

California

Conservation remains in spite of subdivision

When Sydney Hayter turned his ranch into a family-farm subdivision, he took steps to protect his place and every new owner's investment.

The cattle-raising contractor saw to it that those who purchased 20-acre parcels in his Rancho Estates signed up with the Elsinore-Murriata-Anza Soil Conservation District. All plan to put in permanent irrigated pasture and use the plentiful well water in race horse country near Temecula in western Riverside County, Calif.

Although most of the new cooperators are more interested in owning land or building homes, some will raise thoroughbreds where grain and potatoes once grew.

Individual conservation plans call for flood-retarding dams, irrigation systems, grassed waterways, subsoiling and pasture management. A group job to stabilize the channel of Santa Gertrudas Creek is underway by a group of owners whose land was damaged by floods last year.

Continued conservation helps this region retain the right to its Indian name, Temecula, which means "Valley of Joy."—CHARLES GERHART, *district conservationist, SCS, Murriata, Calif.*

Wisconsin

A bit of tallgrass prairie for all to see

A bit of tallgrass prairie like that which amazed the first Europeans to arrive in southern Wisconsin has been re-created in Lake Kegonsa State Roadside Park.

In 1965 Lorenz F. Bredemeier, SCS range conservationist at Madison, was requested by the Dane County Soil and Water Conservation District supervisors to assist Walter A. Jacobson, landscape architect for the Wisconsin Department of Natural Resources, to restore prairie appearances to 150 acres of open land near a camping area.

Bredemeier and Jacobson planned to reestablish, as nearly as possible, the three grassland plant communities that existed in the primeval prairie. Seeds that could not be purchased commercially were provided by the University of Wisconsin arboretum.

The tall grass community consisted mainly of big bluestem, Indiangrass, and switchgrass. This was established on lowland areas and on lower slopes, since these grasses would do a superior job of reducing soil loss and shading out weeds on the wetter soil areas.

An intermediate combination, primarily of little bluestem, green needlegrass, and tall dropseed, was planted on the upper slopes and hilltops.

A mixture of shorter grasses, composed primarily of little bluestem, sideoats grama, and sand dropseed, was planted near the picnic area, along roadsides, and on eroded slopes. Jacobson and Bredemeier preferred the shorter grasses for the heavy-use sites and to permit people to get a better view of the prairie park.

Today many campers use the park. Their campsites are through the wooded areas, and the grassland is used for other recreational activities. The prairie grasses in many places have grown higher than an automobile fender, the modern sequel to the pioneer's stirrups. ♦

Review . . .

Can conservation districts meet the challenge of our urbanizing environment?

Environment and Change: The Next Fifty Years and **Environment and Policy: The Next Fifty Years.** EDITED BY WILLIAM R. EWALD, JR. *1968. Indiana University Press, Bloomington. Based on papers commissioned for the American Institute of Planners' two-year consultation, Part II: The Washington Conference, October 1–6, 1967. 397 and 459 pp. $10.00; paper $495 each.*

Is a national policy on the environment possible without undermining basic concepts of American life and, indeed, incentives that have made and sustained an uniquely American social and economic system?

This issue is woven throughout these discussions on meeting the problems of national growth in an increasingly urban society. The collection of papers gives wide-ranging consideration to environmental concerns that confront Americans in the half-century ahead. The authors are distinguished contributors to current thought and action on the environmental front. Equally distinguished respondents offer critical commentaries.

The book on *Environment and Change* thoroughly probes the status of our contemporary society in relation to the environment on which it has had such vast impact. Beyond a scholarly analysis and recording of present societal values, the many eminent authors project their thoughts as to future critical changes which may occur.

The wide range of subjects related to the total environment are treated in unusual depth by some 25 selected individuals.

The companion volume, *Environment and Policy,* considers questions of national policy with respect to transportation, manpower, education, health, research, and housing, along with natural resource conservation, new institutions to meet changing needs, leisure time, and the potentials and limitations of the "possible city." The questions raised reflect the depth and complexity of the issues.

To what extent, for example, is more effective control at the national, state, and regional levels (rather than purely local decisions) possible without jeopardizing legitimate local needs?

How can regional resource planning and development be organized so as to assure local communities of reasonable determination regarding their own destinies?

How do we provide greater freedom of choice for the individual in a society where increasing leisure, more sophisticated cultural tastes, and greater demand are the rule, without infringing on that very freedom?

Is, indeed, local initiative and action adequate to prevent the steady deterioration of the Nation's waterways, the frequent misuse of the landscape, the increasing pollution of the air, and the congestion, noise, and lack of rational planning that characterize our growing cities and make them increasingly uninhabitable?

These points are relevant not only to the quality of the environment but also to the direction of government leadership and control and to basic tenets of American political, social, and economic faith.

Many answers to the multiple environmental concerns of our complex society are tendered in these volumes. But no solutions are nailed down. A flexible approach dominates the thinking in these pages.

Every level of government has a role—from the broad framework concerns at the national level through the respective responsibilities at multistate, state, regional, and local levels. But it is left to an adequately informed and responsible citizenry how this mix is to be apportioned. It is suggested that better information gathering devices and better means of making this information helpful in understanding the issues are needed at both the leadership and general public levels.

These thought-provoking papers challenge all who are concerned about the prospects for a livable existence in the changing climate of American life. The charge is particularly pertinent to leaders and cooperators in soil and water conservation districts, Resource Conservation and Development projects, and similar groupings designed to assume basic responsibility for local and regional environmental needs.

The authors provide us with no handbook of vocational skills. Rather, they offer a challenge for serious thinkers about man and his future and a strong appeal for an interdisciplinary approach to the solution of problems that are inescapable. Anyone with planning authority, responsibility, or interest should find these treatises useful as a fundamental framework for frequent reference.—LLOYD E. PARTAIN, *assistant to the administrator,* and JAMES N. MILLER, *Information Division, SCS, Washington, D.C.*

Directory of Environmental Education Facilities. *1969. National Audubon Society, New York, N.Y. 10028. 40 pp. $2.*

This is a 1969 revision of the publication formerly entitled *Nature Centers and Outdoor Education Facilities.* The 356 entries include all who answered the recent questionnaire sent out by the Nature Center

Planning Division of the National Audubon Society to facilities in the United States and Canada and including those operated by federal agencies. This new listing represents part of the continuing effort by the society to identify such operations and encourage the development of new facilities.

Position of the chemical profession

Cleaning Our Environment; the Chemical Basis for Action. *1969. A Report by the Subcommittee on Environmental Improvement, Committee on Chemistry and Public Affairs, American Chemical Society, Washington, D.C. 245 pp.; paper $2.75.*

The subcommittee that prepared the report states that it did not set out to inform the experts who must deal daily and directly with the problems of managing the environment. Rather, they hoped primarily to buttress the technical awareness of legislators, administrators, and others who must deal with environmental problems at one or more steps removed from direct involvement with the pertinent science and technology. They also hoped to attract the interest of those scientists and engineers not now involved in such problems who may have useful ideas and work to contribute to their solutions. This report should certainly accomplish both objectives.

The report covers air and water pollution, solid waste disposal, and pesticides in the environment. Major emphasis is given to immediate use of a substantial existing reservoir of science and technology which is not being adequately exploited, according to the report. But, attention also is given to the need for additional fundamental research to provide a better understanding of the environment.

Much of the report deals with environmental matters directly related to urban and industrial developments. But agriculture's possible contributions to adverse environmental situations, as well as the effect on agriculture of environmental influences, also receives attention.

For example, the effects of air pollutants on vegetation, the role of the soil as a filter and biological medium, and the possible impact of chemicals—fertilizers and pesticides—used in agricultural pursuits are discussed.

Of special interest to soil and water conservation districts and SCS is the statement, "Perhaps the greatest source of pollution by agriculture is soil transport of runoff due largely to failure to apply soil conservation practices. This results in transport of pesticides on soil particles to streams, development of high suspended solids and turbidity, and high sedimentation rates in lakes and reservoirs." Thus, the environmental challenge to do a more effective and efficient job of soil and water conservation is obvious.

Some reassuring statements are made in the report on pesticides in the environment. "Available data," it says, "show that most crops grown on pesticide-contaminated soils absorb only very small amounts of the soil contaminant. In most cases the residues resulting from soil contamination are far below the tolerances established for human food and, therefore, are below concentrations which would be harmful to humans. . . . Available evidence indicates that residues present in soils in most cases are not harmful either to the crop or to the soil microflora."

The report was assembled by a task force of 26 environmental scientists and engineers. Some 80 additional experts reviewed various sections of the report. No single cure-all for the Nation's complex pollution problems is proposed. Instead, a total of 73 recommendations are made, ranging from stricter regulation of automobile exhaust to research on the long-term effects of pollutants on people, vegetation, building materials, and the general ecology.

The report will be a useful addition to the library of people and agencies with responsibility for attention to our environment in the years immediately ahead. It is recommended reading for plant scientists, soil scientists, and engineers in soil, water, and related resources work.—D. M. WHITT, *director, Plant Sciences Division, SCS, Washington, D.C.*

Water: Canadian Needs and Resources. BY J. S. CRAM. *1968. Harvest House, Montreal. 184 pp., illus. $5.00; paper $2.50.*

While this book is directed to Canadian water needs and resources, it discusses basic principles and considerations that are of interest to anyone concerned with water problems. About a third of the book is devoted to problems of direct interest to Canadians and those planners in the United States who look to Canada as a possible source of water for inter-basin transfers.—EUGENE C. BUIE, *director,* River *Basins Division, SCS.*

New publications

Trout Farming. . . BY PAUL M. SCHEFFER and L. DEAN MARRIAGE. *1969. USDA Leaflet 552. 8 pp.; illus. $0.10.* This leaflet is the first publication on trout farming based on tne experience of Soil Conservation Service biologists. It presents a map that shows the areas where trout farming is most likely to be successful. The leaflet also describes four kinds of commercial fish culture; describes the need for suitable water, land, and market; and outlines the estimated cost of producing trout and maintaining fish ponds. Questions are listed at the end of the leaflet for the prospective farmer to ask himself to see if the trout farm would be successful.

Why TSI? *1969. USDA Forest Service, PA-901. 14 pp., illus.* Folder, showing the need for timber stand improvement and making the point that, coupled with other improvement practices, timber stand improvement can help increase profits from forest resources.

Rural Indian Americans in Poverty. BY HELEN W. JOHNSON. *1969. USDA Agri. Econ. Rept. 167. 27 pp.* "Most Indian Americans are rural residents, and they are poor . . . Alleviation of poverty status, improvement of educational and employment opportunity, and wider participation in the society at large constitute

high-priority needs for all people in distress. Rural Indians are among the most deprived groups in America today. The pages that follow will give some measure of the depth of their disadvantage."

Major Statistical Series of the U.S. Department of Agriculture, How They are Constructed and Used. Vol. 3. Gross and Net Farm Income. By Mardy Myers. *1969. USDA Agr. Hbk. 365. 17 pp. $0.30.*

The Great Plains Conservation Program. *Rev. 1969. USDA PA 669. 16 pp., illus.* A progress report.

Farm Costs and Returns: Commercial Farms by Type, Size and Location. *1969. USDA Agr. Inf. Bull. 230. 23 pp. Data for 1968.*

Extension Work in Public Affairs. By E. J. Niederfrank and Doyle Spurlock. *1969. USDA PA-932. 8 pp. $0.10.*

Wildlife Management in the National Parks. By The Advisory Board on Wildlife Management (A. S. Leopold, Ch., S. A. Cain, C. M. Cottam, I. N. Gabrielson, T. L. Kimball). *1963, reprinted 1969. U.S. Dept. Int. 14 pp. $0.15.* This reprint from *Administrative Policies for Natural Areas of the National Park Service* makes this important policy statement generally available again.

You're on Camera . . . in Color. By Joe Tonkin. *1969. USDA PA-914. 21 pp., illus. $0.45.* "A television handbook for Extension workers." Equally useful to soil conservationists and others who have occasion to appear on televison.

Audio-visuals

Order USDA slide sets from Photography Division, Office of Information, USDA, Washington, D.C. 20250; filmstrips from Photo Lab. Inc., 3825 Georgia Ave. N.W. Washington, D.C. 20011.

Washout. *1969. USDA. C-160. 50 frames, with narrative. Slide set $8.00, filmstrip $5.50.* The slide set is a study of suburban sediment problems and their cures. It tells the story of America's number one water pollutant and how it is drastically increased when farmland near cities is converted to housing, highways, shopping centers, and other suburban uses. It also shows the proved conservation practices that can be employed to halt or greatly reduce this costly erosion damage.

Big Game Management on Public Lands. *1969. C-159. 79 frames. Slide set $12.50, filmstrip $8.50.* An introduction to big game management on public lands. ♦

Air pollution

Even though the Dust Bowl of the thirties is no longer a focal point of national concern, blowing soil is still a significant cause of air pollution. The Public Health Service reports that 30 million tons of natural dust enter the air over the continental United States during an average year. ♦

Meetings . . .

Environmental quality focus of NACD

The role of conservation districts in improving environmental quality will be the focus of the 24th Annual Convention of the National Association of Soil and Water Conservation Districts to be held February 1-5, in San Francisco, Calif.

More than 2,000 district officials and other conservationists are expected to attend the convention's general sessions, committee meetings, and special functions. Among the speakers will be John Harms, editor of the Kiplinger Agricultural Letter. NACD President Sam Studebaker of Tipp City, Ohio, will discuss "Key Conservation Issues for 1970."

Special activities planned include a Soil Stewardship inspiration meeting, a ladies' tour, a Chinatown banquet, and a post-convention tour of conservation achievements in California.

Sprinkler irrigation meeting on water pollution

"Water Pollution, Our Soiled Heritage" will be the central theme of the annual technical conference of the Sprinkler Irrigation Association when it convenes on February 1-3 in Denver, Colo.

"Problems and Approaches to Waste Water Treatment Systems" will head the discussion, followed by "The Pollution Threat is Real" and "Water Waste Disposal Problems."

Land contractors to discuss future needs

The Land Improvement Contractors of America are holding their annual convention in Las Vegas, Nev., February 23-25.

This year's conference will focus on the future, with special emphasis on the need for land contractors to acquire additional skills to construct the larger and more complicated structures required in soil and water conservation and in the reduction of pollution.

The association has just completed four workshops to show contractors the importance of developing an organization that can help them in acquiring additional capability for the work ahead.

Dates and places

February 1-3, Sprinkler Irrigation Association, Denver, Colo.
1-5, National Association of Soil and Water Conservation Districts, San Francisco, Calif.
9-12, American Society of Range Management, Denver, Colo.
14-18, American Association of School Administrators, Atlantic City, N.J.
23-25, Land Improvement Contractors of America, Las Vegas, Nev.
25-28, American Camping Association, St. Louis, Mo.

March
1-5, American Road Builders' Association, New York, N.Y.
2-6, American Society of Photogrammetry, Washington, D.C.
6-12, Associated General Contractors of America, New Orleans, La.
11-14, National Farmers Union, Denver, Colo.
13-17, National Science Teachers Association, Cincinnati, Ohio.
14-18, Association for Supervision and Curriculum Development, San Francisco, Calif.
15-19, American Concrete Pipe Association Technical Conference, New Orleans, La.
16-18, American Pulpwood Association, New York, N.Y.
20-22, National Wildlife Federation, Chicago, Ill.
20-26, Lawn and Garden Week
21-23, The Wildlife Society, Chicago, Ill.
23-25, North American Wildlife and Natural Resources Conference, Chicago, Ill. ♦

Soil tests related to survey

The Pennsylvania State Universtiy Soil Testing Laboratory uses soil survey information when making fertilizer recommendations. Growers identify the predominant soil in the field being tested and supply the series name as well as field history. Recommendations are based on soil analysis and this additional information. Although only 65 percent of the state has been surveyed for soil type, 45 percent of the samples are coming in with that extra identification. ♦

From the Administrator:

Environment and conservation

As we move into the seventies, we see the leadership of the major conservation forces evaluating their programs and setting goals for the decade ahead.

This month supervisors of the Nation's soil and water conservation districts at the annual meeting of the National Association of Conservation Districts focus attention on their role in improving environmental quality in the future.

These broadened concerns are in the best tradition of the American democratic process, for it is axiomatic of our system that its leadership should reflect the concerns of its citizenship.

And there can be no doubt that the American citizenship is becoming deeply concerned about the quality of its environment. To cite only three examples:

—A recent Gallup poll indicated that three out of four Americans are willing to support higher taxes for conservation work.

—College students across the Nation are planning a campus "teach-in" on environmental problems this spring.

—Since 1963, the various states have more than doubled the total nonfederal funds appropriated, nationwide, for soil conservation district use.

This increased interest by so many groups in what is happening to our natural resources calls for the highest order of planning and performance on the part of conservation bodies, official and private.

All the needs and problems and desires must be balanced and accommodated in a course of action that will meet the growing demands on a nonexpanding land and water-resource base. While providing for essential production needs, good resource planning must consider also the needs for beauty, open space, and outdoor recreation.

Many interests must be blended and many people must be involved. As we go into the seventies, district leaders and professional conservationists need to encourage more urban participation, especially where most citizens already live in cities, towns, or suburbs.

Urban people have the right—and the duty—to be active in resource planning. This is not so much a new direction for conservation districts as it is an accelerating one.

We all know that conservation problems don't stop at the boundary lines of a city any more than soil stops blowing or water stops flowing as it moves from rural to urban areas, or vice versa. Businessmen, housewives, doctors, *are* concerned with land use decisions that affect them and their children.

These people know something about floods; they worry about pollution; and they recognize the despoiled landscape that results from soil erosion in too many urbanizing areas.

The Soil Conservation Service for years has worked with conservation districts and with men and women in other conservation groups to improve the environment, especially in rural areas.

We have a major role to play in this matter in the future, in both rural and urban areas. As a government agency, we must, of course confine our activities to the specific purposes for which we are authorized to spend public funds. But in carrying out our assigned tasks, we have an obligation to see that they contribute the maximum to our common goal of an improved environment for human living.

Kenneth E. Grant

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Flood-prevention lake yields first spring fishing

A new fishing lake in Maine's north country was an immediate product of the first completed flood-protection structure in the Presque Isle Stream Watershed Project in Aroostook County.

Wildlife protection and enhancement plus new recreation opportunities were goals of sponsors of the project planning flood protection for the heart of one of America's major potato farming areas.

In the spring of 1969 as the ice receded from the shoreline, news spread rapidly that fishing was excellent at the 118-acre multipurpose lake at Hanson Brook (shown above). Two to three hundred people per day enjoyed the area's first spring fishing. Public use remained high until more remote lakes became accessible and continued steadily throughout the summer.

Sponsors of the project—the city of Presque Isle, towns of Chapman and Mapleton, and the Central Aroostook Soil and Water Conservation District—were assured in the planning stage by Maine's Department of Inland Fisheries and Game that wildlife management assistance would be available.

In addition to flood-control practices, several hundred acres of new wildlife marsh developments and a fish ladder on the main Presque Isle Stream were planned. Land-treatment measures to reduce pollution of fish-spawning areas and streamflow stabilization also are part of the project.

To prepare for a quality fishery at Hanson Lake, the Fisheries and Game Department treated a 3.3-square-mile drainage area with rotenone to eliminate trash fish immediately after the dam was closed. The lake was stocked with brook trout and the sponsors enforced a five-fish limit on the take and prohibited the use of live bait.—JOHN C. MALLEY, *district conservationist, SCS, Presque Isle, Maine.* ♦

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